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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/627,285 | 07/25/2003 | Masanobu Oshima | Kinoshita C-218A | 2381 |

23474 7590 01/11/2005

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| EXAMINER |
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PATTERSON, MARC A

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1772

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,285

Applicant(s)

OSHIMA ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 5 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Claim Objections***

1. Claims 5 and 12 are objected to because of the following informalities: The meaning of the term 'butene-1' is unclear because the difference between 'butene-1' and the term '1-butene,' in Claim 1, is unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 2, 4 – 8, and 10 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (U.S. Patent No. 5,700,091) in view of Benoit et al (U.S. Patent No. 4,747, 815) and Akao (U.S. Patent No. 5,017,429) and Lang et al (U.S. Patent No. 5,091,241) and Akao et al (U.S. Patent No. 4,906,517).

With regard to Claim 1, Tanaka et al disclose a bag (column 4, line 54) comprising a first film comprising a linear low density polyethylene ('27' in Figure 1; column 5, lines 14 – 16) and a second film comprising a biaxially oriented film comprising 70% nylon 6 ('26' in Figure 1; column 5, lines 16 – 20); the films comprise a base portion of the bag (column 5, lines 24 – 25) which is fused onto a bag body (column 4, lines 16 – 17) and therefore also comprise a bag body as each layer is a body within the bag; linear low density polyethylene is disclosed as a sealant material of the bag (column 5, lines 40 – 41) and the first film is therefore a sealant layer; the

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nylon film covers the sealant layer and is an outer layer of the sealant film (the nylon film is on the opposite side of the linear low density polyethylene film from a snapping portion '16' shown in Figure 1; column 5, lines 28 – 32); with regard to the first film comprising more than 50% by weight linear low density polyethylene, Tanaka et al teach that the sealing material of the bag is either linear low density polyethylene or polypropylene (L-LDPE, PP; column 2, lines 13 – 15); Tanaka et al therefore discloses a film that comprises entirely linear low density polyethylene or comprises entirely polypropylene, and therefore discloses a film that comprises more than 50% by weight linear low density polyethylene; a third film is laminated on a portion of outer surfaces of the bag body (layer '25', laminated to the outside of the nylon film '26' as shown in Figure 1; column 5, lines 24 – 27) which comprises a polyethylene (linear low density polyethylene; column 5, lines 16 – 17); the bag therefore comprises the combination of the bag body and the third resin film; with regard to the claimed aspect of the nylon film being the film is biaxially drawn at a ratio of not less than 2.8 in the machine direction and transverse direction, the film is biaxially drawn at a ratio of not less than 2.8 in the machine direction and transverse direction (column 5, lines 11 – 23); however, the method of stretching the film is given little patentable weight, because Tanaka et al disclose a biaxially oriented nylon film as discussed above; Tanaka et al fail to disclose a bag which is self – standing and linear low density polyethylene that comprises a copolymer of ethylene and 1 – butene and a third resin film that is uniaxially drawn.

Benoit et al teaches that linear low density polyethylenes are copolymers of ethylene and another olefin (column 4, lines 21 – 30); the property of comprising copolymers of ethylene and all other olefins, including butene, is therefore disclosed by Tanaka et al.

Akao teach that a self – standing bag and a non – self standing bag are interchangeable as bags (column 13, lines 26 – 30) for the purpose of obtaining a bag that is heat sealed (column 13, lines 26 – 30). One of ordinary skill in the art would therefore have recognized the advantage of providing for the self – standing ability of Akao in Tanaka et al, which is a bag, depending on the desired sealability of the end product.

Lang et al teaches a film (column 3, lines 65 – 66) for a bag (pouch; column 4, lines 21 – 22) that is uniaxially drawn (oriented in the machine direction, by drawing at a draw ratio, therefore drawing along a single axis, therefore uniaxially drawn; column 3, lines 65 – 68) for the purpose of using a film having a minimum tear strength in the uniaxial direction (Elmendorf tear of at least 2 g/μm in the machine direction; column 4, lines 30 – 31). One of ordinary skill in the art would therefore recognize the advantage of providing for the uniaxially drawn film of Lang et al in Tanaka et al, which is a bag comprising a film, depending on the desired tear strength in the uniaxial direction of the end product.

Akao et al teach a splitting notch (notch for tearing; column 25, lines 34 – 38) in a bag (column 25, line 31) for the purpose of obtaining directional tearing (tearing in the longitudinal direction; column 25, lines 34 – 38). One of ordinary skill in the art would therefore have recognized the advantage of providing for the splitting notch of Akao et al through all of the films of Tanaka et al, therefore formed on the outside of the bag body, depending on the desired tearing direction of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for self – standing ability in Tanaka et al in order to obtain a bag that is heat sealable as taught by Akao and to have provided for uniaxially

drawn film in Tanaka et al in order to obtain a bag having a minimum tear strength in the uniaxial direction as taught by Lang et al and to have provided for a splitting notch in Tanaka et al in order to obtain a bag having directional tearing as taught by Akao et al.

Tanaka et al also fail to teach a first film having a thickness of 80 – 150 μm . However, Tanaka et al teach a sealant layer having a thickness of 40 μm (column 5, lines 14 – 15) and teach the selection of a thickness of the film that is extrudable (the film is a coextrusion film; column 5, lines 11 – 15). Therefore one of ordinary skill in the art would have recognized the utility of varying the thickness of the film to obtain a desired extrudability. Therefore, the extrudability would be readily determined through routine optimization of thickness by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the thickness in order to obtain a desired extrudability, since the extrudability would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Tanaka et al.

With regard to Claim 2, a biaxially drawn polyethylene terephthalate film is laminated between the linear low density polyethylene film and outer layer disclosed by Tanaka et al (column 2, lines 24 – 30).

With regard to Claims 4 and 10, the nylon film disclosed by Tanaka et al contains 55 to 85% by weight nylon 6 and 15 to 45% by weight metaxylylene adipamide (column 3, lines 13 – 20).

With regard to Claim 5, Tanaka et al fail to disclose a first film that comprises linear low density polyethylene and low density polyethylene.

Benoit et al teach that it is interchangeable to use linear low density polyethylene, low density polyethylene, and a mixture of linear low density polyethylene and low density polyethylene (column 4, lines 21 – 29) for the purpose of obtaining a film that is usable at any thickness (column 4, lines 30 – 32). One of ordinary skill in the art would therefore recognize the advantage of providing for the mixture of linear low density polyethylene and low density polyethylene of Benoit et al in Tanaka et al, depending on the desired usability at any thickness of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a mixture of linear low density polyethylene and low density polyethylene in Tanaka et al in order to obtain a film that is usable at any thickness as taught by Benoit et al.

With regard to Claim 6, as stated above, Tanaka et al disclose a bag body (column 4, lines 16 – 17), comprising a laminated film comprising a linear low density polyethylene film which is a sealant (column 5, lines 42 – 43) and a biaxially oriented nylon outer film (column 5, lines 35 – 40); the bag is made from two sheets of the film (two films having two layers, labeled '14' in Figure 2; column 5, lines 11 – 15); by sealing the films using a seal bar (column 4, lines 66 – 67) about a periphery thereof (the seal portion '39' covers the periphery of the bag, as shown in Figure 3; column 5, lines 33 – 35); the bag body is therefore sealed and comprises sheets of the laminated film sealed about a periphery thereof and having an open space therebetween forming an interior of the bag body, the sealant layer of one sheet being disposed inwardly and facing the sealant layer of the other sheet, the outer layers of the sheets facing outwardly to form outer surfaces of the bag body; the nylon film is a multilayer film (column 3,

lines 26 – 27), and first and second resin layer films, of nylon, are therefore laminated onto the opposing outer surfaces of the bag body and extending in all directions across the entirety of the bag body, so that a portion of the bag body is disposed therebetween; the split guide is therefore formed by the bag body, and the resin films combine with the portion of the bag body disposed therebetween to form a split guide extending across the bag body; the notch taught by Lang et al therefore extends in a direction transverse to the first direction, enabling tearing of the first and second resin films and the bag body across the first direction to open the bag body. However, the claimed aspect of the film extending in a direction transverse to the first direction, enabling tearing of the first and second resin films and the bag body across the first direction to open the bag body is directed to a functional use of the invention, rather than its structure, and is therefore given little patentable weight.

With regard to Claim 7, the first and second resin films are laminated onto the sealed films, as discussed above, and are therefore parallel to each other and symmetric with respect to the bag body.

With regard to Claim 8, Tanaka et al disclose that nylon and polypropylene are used interchangeably as materials of the biaxially oriented film (column 2, lines 24 – 27); the first and second resin films therefore comprise polypropylene.

With regard to Claims 11 – 12, the linear low density polyethylene comprises a copolymer of ethylene and 1 – butene and comprises low density polyethylene as discussed above.

With regard to Claims 13 – 14, Tanaka et al disclose first and second resin films having a width of 20 mm (column 5, line 27). Tanaka et al fail to disclose a sealant layer having a

thickness of 80 to 150 μm and first and second resin films having a thickness of 40 to 100 μm . However, Tanaka et al teach first and second resin films having a thickness of 15 μm (column 5, line 38) and teach the selection of a thickness of the film that is extrudable (the film is a coextrusion film; column 5, lines 11 – 15). Therefore one of ordinary skill in the art would have recognized the utility of varying the thickness of the film to obtain a desired extrudability. Therefore, the extrudability would be readily determined through routine optimization of thickness by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the thickness in order to obtain a desired extrudability, since the extrudability would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Tanaka et al.

With regard to Claim 15, Tanaka et al disclose that nylon and polyethylene terephthalate are used interchangeably as materials of the biaxially oriented film (column 2, lines 24 – 27); the laminated film therefore comprises the sealant layer, the outer layer and a biaxially drawn polyethylene terephthalate layer, the outer layer being positioned between the polyethylene terephthalate layer and the sealant layer, outer surfaces of the terephthalate layer forming outer surfaces of the bag body.

With regard to Claim 16, the first and second resin films are biaxially oriented as discussed above, and therefore comprise a crystalline area arrayed in the first direction; with regard to the claimed aspect of the crystalline area being obtained by uniaxially drawing of the first and second films, the structural limitations of the claims fall within the limitations of Tanaka et al as discussed above, because Tanaka et al disclose a crystalline area. The method of making

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the crystalline area is given little patentable weight; with regard to the claimed aspect of the drawing of the resin films enabling tearing of the split guide in only the first direction, the claimed aspect is directed to a functional use of the invention, rather than a structural limitation, and is therefore given little patentable weight.

4. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (U.S. Patent No. 5,700,091) in view of Benoit et al (U.S. Patent No. 4,747, 815) and Akao (U.S. Patent No. 5,017,429) and Lang et al (U.S. Patent No. 5,091,241) and Akao et al (U.S. Patent No. 4,906,517) and further in view of Ito et al (U.S. Patent No. 4,623,587).

Tanaka et al, Benoit et al, Akao, Lang et al and Akao et al disclose a bag comprising two laminated resin films as discussed above. With regard to Claims 3 and 9, Tanaka et al, Benoit et al, Akao, Lang et al and Akao et al fail to disclose two films having a bonding strength of not less than 5 g/mm.

Ito et al teaches a bag (column 6, lines 3 – 10) comprising laminated films having a bonding strength of greater than 5 g/mm (1800 g/15 mm; column 9, lines 20 – 25) for the purpose of making a laminate which does not peel (column 9, lines 20 – 25).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for films having a bonding strength of not less than 5 g/mm in Tanaka et al, Benoit et al, Akao, Lang et al and Akao et al in order to make a laminate which does not peel as taught by Ito et al.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc Patterson 1/10/05
Marc A Patterson, PhD.
Examiner
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